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VI.

SPENCER'S EVOLUTION PHILOSOPHY.

MR. HERBERT SPENCER begins his lately published "Data of Ethics" by remarking that among the correlatives which imply one another in thought is the idea of part and whole ; and he gives various illustrations to show that no correct conception of a part can be obtained without some understanding of the whole to which it belongs. Conduct is thus regarded as an immense whole, of which right and wrong actions are but a part ; and it is shown that these can not be duly interpreted except through a knowledge of conduct in general as displayed, not only by man, but by all grades of inferior creatures.

Mr. Spencer might have taken the work he was writing as a good exemplification of this principle ; for it is part of a systematic body of thought, and is only to be fully understood in connection with it. Moreover, the entire system has been given out in detached fragments, which were only partially intelligible in the absence of the whole that did not yet exist. This protracted and piecemeal mode of publication has not only favored misconception on the part of the fair-minded, but it has offered advantages to ill-disposed critics which they have not been slow to use in producing erroneous impressions upon the public mind regarding the character of Spencer's work.

A new standpoint, however, has now been gained, which is favorable to a more correct judgment of his doctrines. By the publication of the "Data of Ethics" his system is proximately complete, so that we are enabled to contemplate it as a logical whole, and thus to get a juster idea of the meaning of its parts. This is therefore a suitable time to call attention to some of the current misjudgments that have arisen regarding Spencer's views and position as a thinker ; and this can best be done by showing in what way his evolution philosophy has been developed.

The intellectual traits in which preëminence is now conceded to Mr. Spencer are his mastery of method, his breadth of view, and his capacity of organizing ideas. It begins to be seen how all his inquiries have been dominated by a comprehensive plan. His career as a thinker is conspicuously marked by the steadfast purpose with which he has pursued a distant aim. His last publication is on the same subject as his first ; and the interval between them of thirty-seven years has been spent in reorganizing the sciences, and in creating a new philosophy of nature, as a means of accomplishing more effectually the task that he attempted in his youth. What, then, have been the main steps of that mental experience which, beginning with a bias of boyhood, has followed an original and independent course of thought leading to the present powerful effort to make science tributary to a higher morality ?

The youth of Herbert Spencer was passed in circumstances favorable to awaken in him a strong spirit of independent inquiry. His father was a cultivated man of marked character, and a teacher whose cardinal principle in dealing with the minds of the young was, to incite them to do their own thinking. Young Spencer had some active-minded uncles of similar mental type with his father, one of whom was a clergyman of the English Church of very liberal opinions when that trait was much rarer than it is now, and who was the first of his class to publicly and heartily advocate the repeal of the corn laws. Herbert's father and his uncles were much given to the radical discussion of important social questions, to which the boy, being of a reflective turn of mind, listened with intelligent interest. These searching family debates naturally made a strong impression upon him, and so decisively influenced the course of his thinking that at the age of twenty-two he had formed opinions of his own on the important question of the nature, scope, and true limits of civil authority ; and these opinions he wrote out and communicated in a series of letters to a weekly newspaper, "The Nonconformist."

The question to which Mr. Spencer here addressed himself was an ethical one in its largest sense. A supreme authority prescribes and enforces rules of right and wrong to control the conduct of citizens. By what principles shall this governing power be guided in deciding how far the conduct of citizens shall be coerced and where it shall be left free ? The subject was treated under the title of "The Proper Sphere of Government," and it was the object of the discussion to show that the functions of government should

be limited to the protection of life, property, and order, leaving all other social ends to be achieved by individual activities. But beyond this main conception it was implied throughout that there are such things as laws of social development, natural processes of rectification in society, and an adaptation of man to the conditions of social life. Thus, in opening an ethical inquiry in his youth, Mr. Spencer found himself involved in the study of society as a sphere of natural law, and of social questions as problems of science. But he soon perceived that these problems had yet to be worked out. The first conclusion forced upon him by further consideration of the subject was that the basis of morality, as currently accepted, is unsatisfactory—lacks scientific validity. He resolved, therefore, in 1846, to undertake the preparation of a work on society, in which ethical principles shall be traced to their roots. It was finished and issued in 1850 under the title of "Social Statics."

This was an original and greatly advanced work, but, so far as the mind of the author was concerned, it was simply a transitional study which led to new and more comprehensive inquiries. While Spencer's pamphlet of 1842 implied a vague idea of social progress, his book of 1850 is pervaded by it in a far more definite and developed form. The idea of evolution has become fundamental, and discloses itself as of profounder import at every step of the inquiry. It was the writing of "Social Statics," between 1846 and 1850, that forced upon Mr. Spencer's mind the conviction that evolution is to be the pregnant question of the future which must give rise to an extensive revolution of ideas.

Mr. Spencer was brought to the subject in the course of his social studies, but he saw that knowledge was ripe for the broad inquiry. The growth of thought had reached a stage that made a new view of the method of nature not only possible but imperative. The old mythical traditions of the origin of the world were discredited. It was found that the earth has had a vast antiquity, and did not come into existence at all in the condition in which we now know it. The conception of unbroken causation in nature was gaining strength with the rapid extension of the special sciences; and astronomy and geology combined to demonstrate that in the immeasurable past nature has conformed to one system of laws. Natural changes have, therefore, been at work to bring about the present condition of things, while the movement has been on a vast scale from lower to higher. All results concurred in making ever clearer the idea of the unity of nature, from which the conclusion

was logical and inevitable that there is a unity of method in natural causation governing the common progress. The general ripeness of knowledge for the investigation was, moreover, evinced by a vague drift of thought toward evolutionary belief, as shown by the writings of such men as Buffon, Erasmus, Darwin, Lamarck, the author of the "Vestiges of Creation," and others; although the views they put forth were so crude as not to be accepted in the scientific world.*

The period from 1850 to 1860 was one of great activity with Mr. Spencer in the development and organization of his ideas; and it is necessary to dwell somewhat upon it here because it is not generally understood to what an extent the law of evolution had been worked out and established by him long before the public began to

* I do not for a moment claim that Mr. Spencer entered upon this research without valuable help from preceding thinkers. This he has explicitly acknowledged, and has at the same time sharply stated the limit of his indebtedness. In replying, in 1865, to the accusation that he had derived his views from Comte, he says: "And now let me point out that which really *has* exercised a profound influence over my course of thought. The truth which Harvey's embryological inquiries first dimly indicated, which was afterward more clearly perceived by Wolff, and which was put into a definite shape by Von Baer—the truth that all organic development is a change from a state of homogeneity—this it is from which very many of the conclusions which I now hold have indirectly resulted. In 'Social Statics' there is everywhere manifested a dominant belief in the evolution of man and of society. There is also manifested the belief that this evolution is in both cases determined by the incidence of conditions—the actions of circumstances. And there is, further, a recognition of the fact that organic and social evolutions conform to the same law. Falling amid beliefs in evolutions of various orders, everywhere determined by natural causes (beliefs again displayed in the 'Theory of Population' and in the 'Principles of Psychology'), the formula of Von Baer acted as an organizing principle. The extension of it to other kinds of phenomena than those of individual and social organization is traceable through successive stages. It may be seen in the last paragraph of an essay on 'The Philosophy of Style,' published in October, 1852; again in an essay on 'Manners and Fashion,' published in April, 1854; and then, in a comparatively advanced form, in an essay on 'Progress: its Law and Cause,' published in April, 1857. Afterward there came the recognition of the need for further limitation of this formula; next the inquiry into those general laws of force from which this universal transformation necessarily results; next the deduction of these from the ultimate law of the persistence of force; next the perception that there is everywhere a process of dissolution complementary to that of evolution; and, finally, the determination of the conditions under which evolution and dissolution respectively occur. The filiation of these results is, I think, tolerably manifest. The process has been one of continuous development, set up by the addition of Von Baer's law to a number of ideas that were in harmony with it. And I am not conscious of any other influences by which the process has been affected."

take interest in it. During the period referred to Mr. Spencer published twenty-five elaborate articles in the leading English reviews, all of them implying and illustrating the doctrine of evolution, and a large proportion of them devoted directly to its elucidation. Among these may be mentioned : "The Theory of Population" and "The Development Hypothesis" (1852) ; "The Genesis of Science" (1854) ; "Progress : its Law and Cause" (1857) ; "The Nebular Hypothesis" (1858) ; "The Laws of Organic Form" and "Illogical Geology" (1859) ; and "The Social Organism" (1860).

The whole series consisted of original studies of the subjects treated, and they were full of new views resulting from the application of the novel doctrine of development. Some of these papers produced a marked impression at the time, and they all contributed to familiarize the public mind with the conception of evolution as a widely operating principle in nature and in human affairs. It is needful to add that while he was thus actively shaping public opinion on this question Mr. Spencer remained unknown—his name never having been associated with one of these productions. Under the anonymous system of writing for the periodicals to which he was compelled to conform to make his work remunerative, he got no credit for his early views ; the consequence being that they were supposed to be contributed by different thinkers, and belonged to nobody in particular.

Fortunately, however, Mr. Spencer did not confine himself to these partial and unavowed expositions of evolutionary theory. He had reached the conception of evolution as a universal law in 1854, and was thus prepared to begin to deal with it systematically. In that year he wrote his "Principles of Psychology," which was published in 1855. In this work the whole subject of mind in all its grades of manifestation was dealt with from the evolution point of view. The unqualified position was taken that "life in its multitudinous and infinitely varied embodiments has arisen out of the lowest and simplest beginnings by steps as gradual as those which evolved an homogeneous germ into a complex organism" ; and the psychical life was dealt with as thus developed. The genesis of intelligence is traced in that work by first determining the fundamental peculiarity of all modes of consciousness constituting knowledge ; and then consciousness is analyzed and decomposed into successively simpler cognitions so as finally to make apparent the common nature of all thought and disclose its ultimate constituents. Mental evolution is traced out under its concrete

forms from reflex action up through instinct, memory, reason, feelings, and the will. The relation between the organism and its environment was found to be involved in the very nature of life, which consists essentially in the *correspondence* between the order of internal changes and the order of external phenomena. The psychical life follows the same law, so that mind must likewise be interpreted in terms of this correspondence. It is shown that the degree of life and the degree of intelligence vary with the degrees of correspondence ; and, commencing with the lowest creatures, Mr. Spencer traces up these relations as extending in space and time, and as increasing in specialty, generality, and complexity. It is also shown that the correspondence progresses from a more homogeneous to a more heterogeneous form, and that it becomes gradually more integrated—the terms then employed in treating of the evolution of mind being those that are now established in treating of evolution at large.

The evolution of life involving accumulated changes through a long series of generations is, of course, based upon the principle of heredity ; and this principle was recognized by Mr. Spencer as fundamental in the sphere of psychical life. Mental and moral faculties were viewed as products of inherited experiences that have become organized in the nervous constitutions of higher beings. Mr. Spencer showed in 1855 that this doctrine, applied to mind, ends a chronic antagonism between two classes of psychological students. The principle of the evolution of ideas in the hereditary intelligence of the race, and of the evolution of moral sentiments in its hereditary conscience, reconciles the conflicting schools of intuitionism and utilitarianism in mental and moral philosophy. For, while one maintains that all knowledge is the result of individual experience, and the other holds that we have mental and moral intuitions born with us and independent of experience, the conflict disappears when we recognize that, in the experience of the race, capacities of knowing and feeling grow up and are inherited, so that they appear in the mental constitution of individuals as *a priori* conceptions. Intuitions are thus affirmed, but their basis is laid in extended experience and the laws of hereditary life.

The progress of modern thought furnishes no example so remarkable as this of a book appearing ahead of its time. While yet the notion of evolution was regarded as a baseless fancy unworthy the attention of sober-minded thinkers, Mr. Spencer revolutionized mental science by applying it to psychology. It was in a double

sense an "epoch-making" work, as it placed both the doctrine of evolution and the science of mind upon a new basis. There are many who regard it as Mr. Spencer's greatest achievement, and one of the most original treatises of the century. But it was so completely new that it was very imperfectly understood. A few thinkers, whose studies had been in this direction, mastered it so that its influence was soon felt in the best psychological literature, but the book remained unappreciated and unacknowledged—a single small edition sufficing for twenty years.

How far this work was ahead of the age, and even of the advanced mind of the age, is well illustrated by its reaction upon the opinions of Mr. J. S. Mill. Though himself an eminent psychologist and a trained logician, still he only came to a tolerable appreciation of it after long years of reflection. In his "Examination of Sir William Hamilton's Philosophy," Mr. Mill says: "Spencer's 'Principles of Psychology,' in spite of some doctrines which he holds in common with the intuitive school, is one of the finest examples we possess of the psychological method in its full power." Yet the praise here given relates only to the minor characteristics of the work, while the drawback involves its fundamental position in regard to the growth of mind through inherited mental tendencies and capacities. Mr. Mill had a horror of the doctrine of intuitions, which he considered profoundly mischievous, and he labored with the whole force of his intellect to establish the principle that all the ideas, feelings, and powers of the mind are to be explained as originating in individual experience; the key to the entire philosophy of the subject being found in the principle of association of ideas. Mr. Spencer's view he, therefore, long decisively rejected. Yet, after carefully rereading "The Principles of Psychology," some years later, Mr. Mill acknowledged in a private letter that his already high opinion of it had been raised still more, which he recognized as due to the progress of his own mind. Dr. Carpenter, in his recent "Principles of Mental Physiology," remarks: "The doctrine that the intellectual and moral intuitions of any one generation are the embodiments, in its mental constitution, of the experiences of the race was first explicitly put forth by Mr. Herbert Spencer, in whose philosophical treatises it will be found most ably developed"; and he adds, "The great master of the experiential school, Mr. J. S. Mill, was latterly tending toward the acceptance of this view," the proof of which is given in the following quotation from a letter of Mr. Mill upon this subject

to Dr. Carpenter. Mr. Mill says : "There is also considerable evidence that such acquired facilities of passing into certain modes of cerebral action can in many cases be transmitted, more or less completely, by inheritance. . . . So far as my imperfect knowledge of the subject extends, I take much the same view of it that you do, at least in principle." Mr. Mill thus finally accepted the doctrine upon the basis of which Mr. Spencer twenty years before had reconstructed the science of mind ; the doctrine, moreover, that is now recognized as the fundamental characteristic of the English school of psychology.

Thus prepared by a wide range of original studies in evolution, Mr. Spencer began to meditate the project of treating the subject on a more comprehensive scale. It was in 1858, while writing the article on the nebular hypothesis, that the principle of evolution presented itself to his mind as the basis of a system of thought under which all orders of concrete phenomena should be generalized. He saw that the time had come when the diverse branches of scientific knowledge may be brought into much closer relations of mutual dependence than ever before ; as a universal principle of action is of the highest value for unifying scientific relations. It was apparent that a law of natural changes more extended than any other, applicable to all orders of phenomena and so deep as to involve the origin of things, is entitled to the same ascendancy in the world of ideas that it has in the objective world. A genetic law of natural things must form the deepest root of the philosophy of natural things ; and Mr. Spencer, therefore, adopted the doctrine of evolution as the basis of a system of philosophy.

In 1859 he drew up the detailed plan of a series of works designed to embody his philosophic views, and this he published in the form of a prospectus in 1860. It projected ten volumes ; the first devoted to the general method and expounding the theory of evolution ("First Principles"). The second treatise, in two volumes, was designed to apply the theory of evolution to the general science of life ("Principles of Biology"). The third treatise, also in two volumes, was assigned to mental phenomena ("Principles of Psychology") ; and the fourth work, in three volumes, was devoted to social science ("Principles of Sociology"). The final work was to deal with ethical science, in two volumes, under the title of "The Principles of Morality," which, like all the rest, was to be interpreted by the theory of evolution. In this prospectus the discussion was laid out in its logical order, and the contents of each

volume given. The series embraced thirty-three divisions, or topics, and the subject-matter of each was described. The whole scheme was thus completely elaborated in the author's mind, all the minute steps of the discussion being given. How fully and explicitly his system was constructed in thought may be shown by now comparing the programme with the works accomplished, when it will be seen that Mr. Spencer has scored to the line from the start. The treatment of "The Data of Ethics," the first portion of the final treatise, is there laid down in its logical relation to the preceding works, and examination of the now published book shows that its argument has an essential basis in each of the volumes that has gone before. Mr. Spencer allowed twenty years for the execution of the plan of labor thus carefully mapped out.

The difficulties of such an undertaking, great under any circumstances, were peculiarly formidable in his case. He was at that time but little known to the public and had no following, nor was there any general interest in his subject. He proposed to enter upon a pioneer work, in an unexplored domain of thought, so novel in plan and wide in scope that it was appreciated by only a few. Objections were obvious. Some maintained that to bring so many and such diverse subjects as he proposed to deal with into the unity of a truly philosophic plan was impossible ; others held that, if possible, the time had not come for it ; and many agreed that, if possible, and the time had come, the task was too great for any single mind. Mr. Spencer's health was, moreover, so frail that his friends, who had the highest confidence in his capacity to do the work, thought the project in the last degree hopeless of accomplishment. No publisher could be found to undertake so unpromising a scheme, and there was no society to aid or encourage it. The author, with very limited means, had therefore to become his own publisher, thus adding the drudgeries and anxieties of business to the great intellectual labor of the enterprise. But Mr. Spencer decided that the attempt must be made, and, in order to render the undertaking at least partially self-sustaining, he found himself compelled to publish in quarterly parts by annual subscription.

Mr. Spencer has now to be congratulated upon the faith and pluck with which he set to work under such untoward circumstances. The dim hope of twenty years ago has at length become in its main features an achieved reality. Of the ten projected volumes of his system, the first six and a portion of the ninth are published ; and the seventh, upon which he has now resumed work, is well advanced

and may be expected next year. He is also to be congratulated upon the reception and influence of his ideas. While yet unfinished and but partially understood, his philosophy has made a deep impression upon the most active minds of the age. Not only have elaborate criticisms been made upon it in all reviews, and a host of books appeared, the authors of which have made reputations by their attempts to answer him, but his views have profoundly affected the course of thinking of multitudes, and guided the thought of many who are devoted to scientific and philosophic inquiry. Though his system appeared in a form most unfavorable to the extension of its influence, it has nevertheless steadily grown in favor with leading thinkers, and has attained a commanding position in the world of ideas, by sheer force of its original character and its adaptation to the intellectual requirements of the period. Its successive parts have been called for and reproduced in different countries, and its progress is now regarded with such interest that his recent volume on Ethics appears in several translations on the Continent simultaneously with its issue in England and the United States.

But though Spencer's system has been well appreciated by many liberal minds, it has had to make headway against the strong tides and violent winds of adverse criticism, much of which has been so grossly unjust as seriously to prejudice the public mind in regard to its character. How open he has been to attack is sufficiently apparent from the foregoing statements. His mental career has not only been a progress, leaving behind him outgrown opinions, but his work has been on such a scale that it could only be submitted to the public in dislocated parts, most liable to be misunderstood. This being known, candid minds would suspend judgment or state the qualifications under which it must be taken. One would think that the attitude of a man devoting his life to a great and important intellectual undertaking might command a reasonable forbearance, if not some generosity in the treatment of his work ; but there has been more mean advantage taken of Spencer's position and his mode of publication than is creditable to the critical class. An illustration of this has been furnished by the manner in which his ethical discussions have been treated.

It has been explained that "Social Statics" was a transitional work that led on to the development of maturer views. The rough, inadequate treatise of 1850 was superseded by his subsequent plan of publications. Because of this, when the work was out of print in England, he opposed its republication in this country, and only

consented to it on the condition of inserting a preface to explain that he no longer adhered to various views there enunciated. But all this precaution and all the accessible evidence that Mr. Spencer was working on toward a new exposition of ethical doctrine were insufficient to protect him from flagrant misrepresentation of his views upon this subject. Opinions disclaimed were still imputed to him, and false constructions were persistently applied to opinions still maintained. Writers who had abundant means of knowing better were prominent in this discreditable business ; and in books and in the leading reviews they attacked Spencer's theory of morals, holding it up to reprobation, although there was no authorized exposition of it in existence. Nor did they give the slightest intimation to their readers that Mr. Spencer was preparing to consider the subject in connection with the works upon which he was known to be engaged. As it was impossible to follow and expose these misrepresentations, Mr. Spencer had to submit to being systematically falsified in his position before the public, notwithstanding the explicit protests that he had made.

Another example of erroneous judgment passed upon Spencer's system, and which was favored by the manner of its publication, involves a perverted conception of the whole character of his philosophy. His method contrasts with all former philosophic methods by confining itself to phenomena and building entirely upon the results of modern science. According to him, it is the aim of philosophy to get the widest and deepest interpretation possible of the constitution and course of nature ; and it consists in the highest principles or most comprehensive truths that can be observed in the order of nature. As the sphere of philosophy thus coincides with the knowledge of natural things, it must begin where science begins and end where science ends ; while the materials with which it builds are the facts, inductions, and generalizations arrived at by observation, experiment, and reasoning in all the divisions of scientific investigation. Spencer holds that philosophy is the most highly unified knowledge ; its formation, therefore, must be a process of fusion or coördination of hitherto disconnected truths into a coherent and harmonious body of thought. If this is logically done, the resulting philosophy will have the same validity as the science upon which it rests ; in fact, it is science in its highest form of expression. Mr. Spencer adopted the doctrine of evolution as the basis of a philosophical system because it offered a method of bringing the truths of science into the unity of an organic whole ; and,

as it thus becomes a comprehensive synthesis of truths established in various spheres of inquiry, he has given it a name descriptive of the method and called it the *Synthetic Philosophy*.

Philosophy, however, is older than science, and as currently accepted is much wider than nature. Thus far, indeed, the philosophic mind has busied itself a good deal more with what is outside of nature than that which is within it. To restrict the sphere of philosophy and make it coextensive with science was, therefore, an innovation, and so Mr. Spencer was bound to explain himself. The ground taken was, that what is above nature is beyond knowledge. In an essay of one hundred and thirty-five pages, entitled "The Unknowable," and prefixed to his first volume, he showed that there are inexorable limits to our knowing faculties, imposed by the very nature of intelligence. He proved that thought can not transcend the relative and phenomenal or penetrate beyond that orderly sphere of environing uniformities by intercourse with which intelligence itself is evolved.

That preliminary essay was in no proper sense a part of Spencer's system. It was introductory to it by circumscribing the field so as to get clear of illegitimate conceptions, and fix the boundary within which the system itself was to be developed. If that opening essay had never been written, the body of philosophic thought would have been just what it is now. But it was published first; and, as, when issued, the positive scheme was not yet in existence, it was strangely interpreted as being the essence of Spencer's philosophy. That is, the attempt to fix a limit beyond which speculation becomes illusive resulted in his being himself placed outside that limit. Though he had projected ten volumes devoted to an exposition of positive knowledge, the impression arose that his philosophy was simply one of denial. In ruling out the "unknowable" from the sphere of valid knowledge, he became the philosopher of the "unknowable"; and, though his system was constructive to a degree that had never before been attempted, though it was composed warp and woof of the truths of the natural world, it was yet ranked as negative and destructive. He attempted to build up a philosophic fabric out of the solid data of established science, and got the credit of a system of nescience and nihilism. Under the notion that it is merely a system of bad metaphysics leading to nothing, many well-meaning persons have been deterred from reading Spencer's philosophy; though, if it had been published all together, so as to be looked upon as

we now see it, no such absurd notion could ever have been entertained.

Another widespread error regarding Mr. Spencer's work involves no less a question than that of its originality, and his character as an independent thinker. He was long accused of borrowing his ideas from Comte, but that charge is now effectually exploded. It is, however, still said that he is a follower of Darwin, and that while Darwin is the master who founded evolution, Spencer is the disciple who has popularized it. Though in this there is no truth, yet the imputation crops up with such pertinacity that it requires to be met at every proper opportunity, alike in the interest of the public which is misled, and as an act of justice to the parties misrepresented.

The last form of the charge which attracted my attention appeared in a recent number of the "Fortnightly Review," in an article by Mr. Frederick Pollock, which is stated to be part of an introduction to the forthcoming essays of the late Professor Clifford. In sketching the life of his friend Clifford, in his college days, Mr. Pollock says: "Meanwhile he was eagerly assimilating the ideas which had become established as an assured possession of science by Mr. Darwin, and were being applied to the systematic grouping and gathering together of human knowledge by Mr. Herbert Spencer." Mr. Darwin is thus ranked as the establisher and Mr. Spencer as the applier of certain ideas by a man who would represent the suspicion that he was not perfectly well informed on the matter he wrote about. Yet the evidence that these "eagerly assimilated" ideas are here falsely credited is decisive.

The first effort that brought Professor Clifford prominently before the public was a lecture at the Royal Institution, given in 1868, the topic chosen being "On some of the Conditions of Mental Development." This is regarded as one of his most marked performances, and is announced to be placed first in the forthcoming collection of his essays. The characteristic of the discourse, and which gave it an impressive novelty to the audience, was its happy illustration of the idea of evolution in explaining mental effects. But Professor Clifford did not pretend to originate this view; where, then, did he obtain it? Mr. Darwin had never written upon the subject of "mental development"; Mr. Spencer had. He had, moreover, as we have seen, totally reconstructed the science of mind on this very basis, and that years before Mr. Darwin's name was ever heard of in connection with development of any kind. It

is therefore easily to be inferred from what source Clifford actually obtained his ideas. But it happens that we are here not left in any doubt. Professor Clifford, feeling that he had been too careless in not giving credit for his views in the lecture itself, subsequently wrote a letter to the "Pall Mall Gazette," acknowledging his indebtedness to Spencer for fundamental ideas presented in his Royal Institution address.

Mr. Darwin is known in connection with evolution chiefly by the important principle of natural selection, which was independently worked out by himself, as it was also by Mr. Wallace. But natural selection is not evolution ; it is but a subordinate part of it—it was a principle superadded to a previously existing body of thought ; and how completely that had been elaborated by the independent studies of Mr. Spencer I have already shown. Mr. Darwin's first book on this subject, "The Origin of Species by Means of Natural Selection," was published in November, 1859. Mr. Spencer's prospectus of the evolution philosophy bears date March, 1860 ; and (as there is plenty of evidence) it was drawn up in the form in which it was published *in the previous year, and before Mr. Darwin's work appeared*. Indeed, I have myself seen an earlier manuscript form of this programme, embracing seven volumes instead of ten, but laying out the same subjects in the same order, and by the same method, that was prepared and became a matter of private correspondence in 1868, a year before Darwin's work was published. Notes to the prospectus, moreover, showed where large portions of the system had been already printed. Mr. Spencer could certainly not have been indebted to Mr. Darwin for the ideas which constituted the evolution philosophy, because Mr. Darwin had as yet given no such ideas to the public.

No man is probably better instructed in regard to the claims of "Darwinism" than Professor Huxley, and in lecturing before the Royal Institution he said : "The only complete and systematic statement of the doctrine" (evolution) "with which I am acquainted is that contained in Mr. Herbert Spencer's 'System of Philosophy,' a work which should be carefully studied by all who care to know whither scientific thought is tending." Yet this system was not only laid out in its logical completeness, in ten volumes, before Mr. Darwin brought forward the principle of natural selection, but when it appeared it necessitated not the slightest change in Spencer's plan of exposition—not even the introduction of a new chapter or a new title. It fell into its place in the biology as a proximate

principle that had to be scientifically resolved into its ultimate factors—interpreted, qualified, and assigned its proper position in an already organized body of doctrine. Mr. Spencer assimilated it in his philosophy, recognized its great importance, and suggested the better phrase for it, "survival of the fittest," now widely used.

Mr. Darwin's valuable researches, no doubt, gave an important impulse to the subject both in the scientific world and in the popular mind. Natural selection was so comparatively simple a conception and so obvious a truth that it was well fitted to make a sharp impression; and in the current careless thinking it was very natural that it should be exaggerated, and that "Darwinism" and evolution should come to be regarded as the same thing. But the effect of this error has been to narrow the question and hinder the recognition of its real extent. For evolution, if a reality at all, is both a process of profound complexity and a universal law to be tracked in its obscure and varied workings through many fields of phenomena. It follows that the proof of evolution is not to be found in the establishment of any one principle. It is the immense body of concurrent evidence, the consilience of proofs of various orders, and the ever-widening stream of confirmatory facts that establish the theory. Mr. Darwin never considered the subject from this point of view; but it was the point of view assumed by Mr. Spencer at the outset. We have seen how he grew into the inquiry, and how it widened before him. He had gathered evidence that evolution is a universal law of nature, had traced its dependence upon the principle of the conservation of energy, had analyzed it into its ultimate dynamical factors, had shown that it must reshape various of the sciences, and had done the work in one of them, and, finally, had constructed a philosophical method upon its basis, and all this before Mr. Darwin appeared in this field of investigation.

That Mr. Spencer is in the strictest sense the creator of his own work is not open to doubt, nor has there been any intelligent question about it. That which characterizes his system of thought, its wealth of facts, its searching analysis, its synthetic grasp, its logical unity, and its noble beneficence of application—stamps it also as the product of a single, original, and independent mind.

E. L. YOUNMANS.